Enhancement Activities for CSP Hondo Creek Watershed

Brush Management-Wildlife Corridors – Conduct brush management in a manner that benefits wildlife. Brush management in mosaic, contoured, or natural patterns is preferred to straight strips of blocks. Brush management must be selective, leaving desirable browse, mast, and cover species in place. Clearings shall be no wider than 300 feet with no more that 40 to 50% of the pasture as open.

\$5.00 per acre

Nutritional Balance Analyzer (NUTBAL) assessment-forage quality and quantity - A minimum of 12 NUTBAL samples will be collected per year to prepare a yearlong nutritional profile for the ranch. Information received from testing will be used to adjust stocking rate, rotational grazing system and/or supplemental feeding program.

\$500.00 per year

Use of alternative watering facilities – The installation of a water trough within ½ mile of permanent surface water. Surface water includes streams, ponds, or springs. Water trough must be installed according to Natural Resources Conservation Service standard and specifications for water troughs.

\$500.00 per year

Control access to riparian areas – Limit livestock access to riparian areas by use of one of the following options:

- A one herd grazing system that limits grazing periods to a maximum of 28 days of grazing with a deferment period of a minimum of 120 days to immediately follow grazing. Grazing will be rotated in the pastures once riparian vegetation has been grazed to a minimum 12 inch stubble height.
- The preferred method is to fence the riparian area so that one or more riparian pastures are created. Grazing will be managed so a minimum 12 inch stubble height is maintained on grazed forage. Riparian pastures may be grazed a maximum of 90 days per year during the dormant season and 30 days per year during the growing season.
- Fence riparian areas to exclude livestock grazing.

\$7.00 per acre

Rotation of salt, minerals, and supplemental feeding areas.

Move these locations a minimum of 150 feet every 30 days and make sure they are not adjacent to watering locations.

\$0.25 per acre

Implement light grazing. Reduce and maintain the stocking rate to 50% of the NRCS recommended safe stocking rate (average carrying capacity) and follow a prescribed grazing plan.

\$5.00 per acre

Cage native seedlings and saplings of desirable species.

Construct cages around seedlings or stunted plants of desirable tree and shrub species to protect them form excessive deer browsing for at least five years to enhance survival. Cages should be at least a four foot by four foot with material heavy enough to protect seedlings and with openings no larger that 4inch by 4 inch. Cages will be maintained for at least 5 years to maximize survival.

\$ 20 per cage

Create and Fence shallow water areas for wildlife. Create new shallow water earthen depressions near windmills, water storage facilities, troughs or along pipelines (at a spacing of at least ¼ mile apart), to provide wildlife water and encourage diverse vegetation. Fence depressions to exclude grazing. Depressions should be at least 10 feet in diameter and at least 1 ft deep in center. Maintain yearlong water.

\$500 per unit

Fence ponds (including spillway areas) to exclude grazing, protect shoreline and allow maximum development of shoreline vegetation. A livestock access lane may be constructed to provide watering location no more than 20 ft wide. The fence will be constructed to create at least a 35 ft buffer and no more that a 120 ft buffer around the pond at or above the spillway level. The area may be occasionally grazed but a vegetation stubble height of at least 12 inches must be maintained.

\$1.75 per foot of fence

Seed and fence burned brush pile areas. Seed burned brush pile areas to a mix of at least 6 native species including at least 2 perennial forbs comprising at least 25% of the mix. Temporarily fence off areas (at least 20 ft x 20 ft) for at least 5 years to allow maximum establishment and growth of seeded species.

\$200.00 per unit

Certified brown-headed cowbird trapping. Use moveable cowbird traps only between March 1 and May 31 to increase survival of songbirds. Traps will be placed in the same pasture as livestock and moved as the livestock are rotated. Trap(s) will be constructed according to accepted design and used in accordance with accepted protocol by landowners trained and certified by Texas Parks and Wildlife Department. One trap is allowed for each separate herd of livestock

\$700.00 per unit

Change the type of domestic livestock (remove goats and/or exotics). In order to reduce browsing pressure and improve wildlife habitat, remove all goats from all rangeland pastures for the duration of the contract AND/OR If exotic wildlife species are confined by a high fence, remove all exotics to the extent possible within the high fence for the duration of the contract.

\$3.00 per acre

Livestock exclusion to improve quail nesting habitat. In native rangeland pastures where nesting cover for quail is lacking, exclude all livestock from the pasture for one or two years to hasten the development of tall bunch grasses.

\$5.00 per acre

Conduct white-tailed deer census and follow a written management plan. Conduct an annual deer survey (helicopter or spotlight) and carry out the recommended harvest according to a written wildlife management plan under the guidance of a wildlife biologist.

\$1.00 per acre

Disking to improve quail habitat on range or pasture. If forbs and weed growth is inadequate, conduct disking or other equivalent soil disturbance during December to February to stimulate quail food production. Disk in strips up to 30 feet wide, on at least 5% of a pasture, in close proximity to nest cover and brush. Re-disk the same strips as needed every second or third year. Total aggregate of all disked areas will not exceed 25% of the offered acres. Do not disk near sensitive areas.

\$5.00 per acre

Leave 20 foot perimeter on cropland un-plowed and un-planted for forbs production, Where cropland fields border rangeland, pastureland or grown up fencerows, cease farming a strip at least 20 feet wide to allow forbs, weeds, and grasses to establish and provide wildlife habitat. Do not control weeds in these strips. This enhancement is not to be used as a substitute for field borders.

\$7.00 per acre

Leave 1 acre for every 40 acres of cropland (corn, sorghum, small grain) un-harvested. Leave at least one acre and up to four acres per forty acres of corn, sorghum, or small grain un-harvested. Leave standing crop un-plowed for at least 120 days. Crop may be manipulated by shredding, dragging, etc. Abide by baiting regulations if hunting migratory birds.

\$150.00 per acre

Residue management at 12 inches and untilled and un-grazed from harvest to Jan. 31. After Corn or grain sorghum is harvested, leave the stubble standing at least 12 inches high and do not plow or graze residues until after January 31 for the benefit of wildlife.

\$1.00 per acre

Wildlife Habitat Index Score Improvement. For each tenth increase in the wildlife habitat index score above the .5 minimum score, the producer will receive a payment of \$2.00. Example a score of .6 receives a payment of \$2.00; a score of .8 receives payment of \$6.00 per acre the habitat index score was increased on.

\$2.00 per tenth increase over 0.5

Cropland Enhancements:

Soil Management Enhancement – SCI. Reduce the number and aggressiveness of tillage operations and utilize crop rotations, cover crops or mulches to increase biomass returned to the soil. The combination of reduced tillage/increased biomass will improve soil organic matter, condition and tilth.

\$1.16 per 10th SCI

Incorporate all preplant nitrogen applications less than 30 days prior to planting. Initial nitrogen applications will be incorporated near planting time or after planting to reduce the opportunity for nitrogen losses caused by leaching or surface runoff. Nitrogen will be incorporated by knifing, injecting, with irrigation water or other suitable means.

\$2.00 per acre

Establish Perennial Field Borders at lower field edges.

Perennial grasses or grass/forbs mixtures are established where overland flow leaves the field. Borders will be at least 20 feet wide or wider if needed to meet state or local criteria. Refer to NRCS practice standard for Field Border (386) for specific design information.

\$0.08 per foot

Sample Soil annually according to Land Grant University Guidance. Nutrient applications for each crop grown will be based on annual soil analyses and recommendations rather than relying on budgets for determining fertilizer rates for years between soil analyses.

\$1.00 per acre

Base Nitrogen applications on deep N soil sampling. Initial nitrogen applications will be based on samples taken and analyzed for soil nitrate from the $0-24^{\prime\prime}$ soil depth. Samples from the $0-6^{\prime\prime}$ depth will be used to determine all other nutrient applications. Deep N sampling may indicate greater amounts of soil nitrogen available for plant growth than routine $0-6^{\prime\prime}$ samples.

\$1.00 per acre

Split nitrogen applications. Apply nitrogen in increments just prior to plant need. Minimum of at least two applications per crop.

\$2.00 per acre

Apply in-season nitrogen according to soil or tissue tests. Procedures such as pre-side dress nitrogen testing or neticle analysis.

Procedures such as pre-side dress nitrogen testing or petiole analysis will be used to determine in-season nitrogen applications. These samples will be taken in addition to routine soil analyses.

\$2.00 per acre

Filter Strips. Establish strips of perennial grasses or grass/forbs mixtures along lower field edges or along the margins of waterways or other water courses to filter contaminants from overland sheet flow. The design of Filter Strips will be based on flow lengths that will reduce dissolved contaminants in runoff or to reduce dissolved contaminant and particulate loading if associated with animal feeding operations. Refer to NRCS practice standard for Filter Strip (393) for specific design information.

\$0.16 per foot

Test irrigation water for nitrates annually (Leona Aquifer).

Annual testing of irrigation water will be conducted to determine average nitrate concentration. Nitrates provided by irrigation water will be accounted for in nutrient budgets. Two or three tests per well may be needed to establish baseline nitrate concentrations.

\$50.00 per test

Rotate at least two different crops in a three year time frame.

Grass type crops such as corn, sorghum or small grains will be rotated with broadleaf crops such as cotton during the three year time frame. Crop rotations with unrelated crops help break the infestation cycle of immobile pests.

\$2.00 per acre

Substitute alternative pesticides for those with an extra high hazard rating. Pesticide hazard ratings of alternative pesticides will be determined using the Windows Pesticide Screening Tool (WIN-PST). Substitutions of pesticides will be for the life of the CSP contract.

\$10.00 per acre

Utilize traps, sticky cards and/or soil sampling to monitor pests. Light, pheromone, feeding attractant traps, sticky cards, or soil sampling will be used each year to determine the presence/migration pattern of selected insect pests. Treatment decisions will be based on locally accepted IPM guidelines.

\$1.00 per acre

Utilize banding and incorporation of Soil Applied Pesticides.

Banding soil applied pesticides over the row and incorporating will allow the total amount of pesticide used in a field to be reduced.

\$5.00 per acre

Substitute non-chemical methods. Release beneficial insects such as lacewings, lady beetles or trichogramma wasps to reduce the need for pesticide applications.

\$10.00 per acre

Use hooded sprayers, direct injection equipment and/or sensor guided sprayers to reduce the total amount of pesticide used and more accurately apply pesticides where they are needed. This will reduce the potential for off site chemical losses or human exposure.

\$5.00 per acre

Proper irrigation timing based on soil, plant and weather monitoring. Apply irrigation water to promote optimum growing conditions for the crop while avoiding excessive water applications that can result in leaching or surface runoff. Avoid saturated soil conditions that create an environment favorable for diseases. Records must include weather, soil moisture and physiological growth stage of crop at time of irrigation applications.

\$5.00 per acre

Establish Perennial Field Borders at lower field edges.

Perennial grasses or grass/forbs mixtures are established where overland flow leaves the field. Borders will be at least 20 feet wide or wider if needed to meet state, local or herbicide label requirements. Refer to NRCS practice standard for Field Border (386) for specific design information.

\$0.08 per acre

Filter Strips. Establish strips of perennial grasses or grass/forbs mixtures along lower field edges or along the margins of waterways or other water courses to filter pesticides from overland sheet flow. The design of Filter Strips will be based on flow lengths that will reduce dissolved contaminants in runoff or to meet pesticide label requirements. Refer to NRCS practice standard for Filter Strip (393) for specific design information.

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